

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for re-ordering requests for shared resources, the method comprising:

receiving, by an arbiter, requests for accessing the shared resources from one or more requestors, wherein a plurality of requests may be received from each requestor;

associating, by a buffer manager, a unique identifier tag with each request from the one or more requestors;

arbitrating, by the arbiter, between the plurality of requests in such a way so that the plurality of requests from each requestor may be re-ordered in non-FIFO order;

selecting, by the arbiter, a next request to access the shared resources based on the re-ordering of requests;

sending, by the arbiter to the requestor, a unique identifier tag associated with the selected request and a strobe signal indicating that the selected request is being serviced by a memory controller, so that the requestor is informed as to the order in which the request from the requestor is being serviced; and

communicating an information from the arbiter to ~~a~~ the memory controller, where the memory controller accesses the shared resources and the information permits the memory controller to service the ~~next~~ request selected by the arbiter.

Claim 2 (cancelled)

Claim 3 (currently amended): The method of claim 2 1, further comprising:

using the identifier tag by the requestors to keep track of when the plurality of requests from each requestor are serviced.

Claim 4 (cancelled):

Claim 5 (currently amended): The method of claim 4 1, further comprising:

embedding additional information in the identifier tag that relates to data associated with the request.

Claim 6 (original): The method of claim 1, wherein the requests comprise memory requests, and wherein the shared resources comprise a shared memory system.

Claim 7 (original): The method of claim 5, wherein the selected request comprises a memory write request.

Claim 8 (original): The method of claim 7, wherein the additional information in the identifier tag associated with the memory write request includes a location in buffer memory of data to be written.

Claim 9 (original): The method of claim 5, wherein the selected request comprises a memory read request.

Claim 10 (original): The method of claim 9, wherein the additional information in the identifier tag associated with the memory read request includes a location in buffer memory in which the data is to be written.

Claim 11 (currently amended): A system for re-ordering requests for shared resources, the system comprising:

one or more requestors for sending requests for accessing the shared resources, wherein a plurality of requests may be received from each requestor;

a buffer manager for associating a unique identifier tag with each request from the one or more requestors;

an arbiter for receiving the plurality of request and for arbitrating between the plurality of requests in such a way so that the plurality of requests from each requestor may be re-ordered in non-FIFO order, and for selecting a next request to access the shared resources based on the re-ordering of requests;

the arbiter also configured to send to the requestor a unique identifier tag associated with the selected request and a strobe signal indicating that the selected request is being serviced by a memory controller, so that the requestor is informed as to the order in which the request from the requestor is being serviced; and

a memory controller configured to access the shared resources, wherein the arbiter communicates an information to the memory controller and wherein the information permits the memory controller to service ~~a next~~ the request selected by the arbiter based on a re-ordering of the requests.

Claim 12 (cancelled)

Claim 13 (currently amended): The system of claim ~~12~~ 11, wherein the requestors use identifier tags to keep track of

when the plurality of requests from each requestor are serviced.

Claim 14 (cancelled)

Claim 15 (currently amended): The system of claim ~~14~~ 11, wherein the identifier tag includes additional information that relates to data associated with the selected request.

Claim 16 (original): The system of claim 11, wherein the requests comprise memory requests, and wherein the shared resources comprise a shared memory system.

Claim 17 (original): The system of claim 15, wherein the selected request comprises a memory write request.

Claim 18 (original): The system of claim 17, wherein the additional information in the identifier tag associated with the memory write request includes a location in buffer memory of data to be written.

Claim 19 (original): The system of claim 15, wherein the selected request comprises a memory read request.

Claim 20 (original): The system of claim 19, wherein the additional information in the identifier tag associated with the memory read request includes a location in buffer memory in which the data is to be written.

Claim 21 (currently amended): An apparatus for re-ordering requests for shared resources, the apparatus comprising:

means for receiving, by an arbiter, requests for accessing the shared resources from one or more requestors, wherein a plurality of requests may be received from each requestor;

means for associating, by a buffer manager, a unique identifier tag with each request from the one or more requestors;

means for arbitrating, by the arbiter, between the plurality of requests in such a way so that the plurality of requests from each requestor may be re-ordered in non-FIFO order;

means for selecting, by the arbiter, a next request to access the shared resources based on the re-ordering of requests;

means for sending, by the arbiter to the requestor, a unique identifier tag associated with the selected request and a strobe signal indicating that the selected request is being serviced by a memory controller, so that the requestor is informed as to the order in which the request from the requestor is being serviced; and

means for communicating an information from the arbiter to a the memory controller, where the memory controller accesses the shared resources and the information permits the memory controller to service the next request selected by the arbiter.

Claim 22 (cancelled)

Claim 23 (currently amended): The apparatus of claim ~~22~~ 21, further comprising:

means for using the identifier tag by the requestors to keep track of when the plurality of requests from each requestor are serviced.

Claim 24 (cancelled)

Claim 25 (currently amended): The apparatus of claim ~~24~~ 21, further comprising:

means for embedding additional information in the identifier tag that relates to data associated with the request.

Claim 26 (original): The apparatus of claim 21, wherein the requests comprise memory requests, and wherein the shared resources comprise a shared memory system.

Claim 27 (original): The apparatus of claim 25, wherein the selected request comprises a memory write request.

Claim 28 (original): The apparatus of claim 27, wherein the additional information in the identifier tag associated with the memory write request includes a location in buffer memory of data to be written.

Claim 29 (original): The apparatus of claim 25, wherein the selected request comprises a memory read request.

Claim 30 (original): The apparatus of claim 29, wherein the additional information in the identifier tag associated with the memory read request includes a location in buffer memory in which the data is to be written.